

# Direct Optical Imaging of Exoplanets

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# Direct Optical Imaging of Exoplanets Group

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# Goals

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- Science capability as a function of mission scale
- Architectures options
- Propose technology roadmap:
  - Roadmap already defined for flagship internal coronagraph
  - Define technology milestones leading to flight as a function of scaling
- Community efforts and contributions

# Direct Imaging of Exoplanets

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## 1. Introduction

### 1.1 Science Goals

### 1.2 Requirements

## 2. Observatory Concept

### 2.1 Architecture and Scaling

- Internal Coronagraphs
- External Occultors and Hybrids

### 2.2 Performance

## 3. Technology

### 3.1 Past accomplishments

### 3.2 Future Milestones

## 4. Research and Analysis goals

**1-5 yrs**

**5-10 yrs**

**10-15 yrs**

Indirect Detection Programs  
(Ground-based advanced RV - Space astrometry)

Space

Mid-Size mission  
Giant planets, systems,  
disks, few terrestrial

Flagship mission  
Earth size in HZ

near space

Near space: rockets/balloons/Low orbit  
zodis, few giant planets

Ground

10m class planet finders  
Young EPGs and disks

Ground based GSMT ExAO  
very young, reflected light EPGs, disks

*note: boxes start with beginning of mission development*